NAT. HIST. BULL. SIAM SOC. 30 (2) : 91–99, 1982.

BIRDS ON KO LIBONG, SOUTHERN THAILAND.

*Roland Eve** *and Ann-Marie Guigue***

ABSTRACT

A total of 93 species of birds were recorded on Ko Libong, Trang Province, during 6-21 May 1981 and 31 January–2 February 1982. This included one species, the Crab Plover (*Dromas ardeola*), not previously recorded for Thailand and a further 17 species which were new for Trang Province. In addition, 17 species were proved breeding during May.

Mangrove held more species of landbird than any other wooded habitat while fewest species were found in inland forest. Fourteen species were shared between mangrove and plantation, compared with only 5 between forest and plantation. Only 4 species utilised intensively managed young plantations.

INTRODUCTION

We made visits to the island of Ko Libong, Trang Province, southern Thailand during 6-21 May, 1981 and 31 January–2 February 1982, in order to make a preliminary survey of the birds. Our realisation that the composition of the forest bird community differed markedly from that on the adjacent mainland led us to concentrate much of our attention on the landbirds. This paper lists all the bird species we recorded and in addition, examines the habitats occupied by the landbirds and attempts to explain them in terms of some of the tenets of island biogeographical theory (MACARTHUR & WILSON. 1967).

THE ISLAND

Ko Libong (7° 15′ N; 99° 25′ E) is situated approximately 3.5 km off the west coast of peninsular Thailand. Its area is approximately 34 km^2 and its shape is roughly triangular with maximum dimensions of 8×9 km (Figure 1). In the west, it rises to an elevation of 344 m and the hill slopes are clothed in semi-evergreen forest down to

* les Salzards, St Martin-des-Champs, 89170 St. Fargeau, France.
** Mognard, 73410 Albens, France.

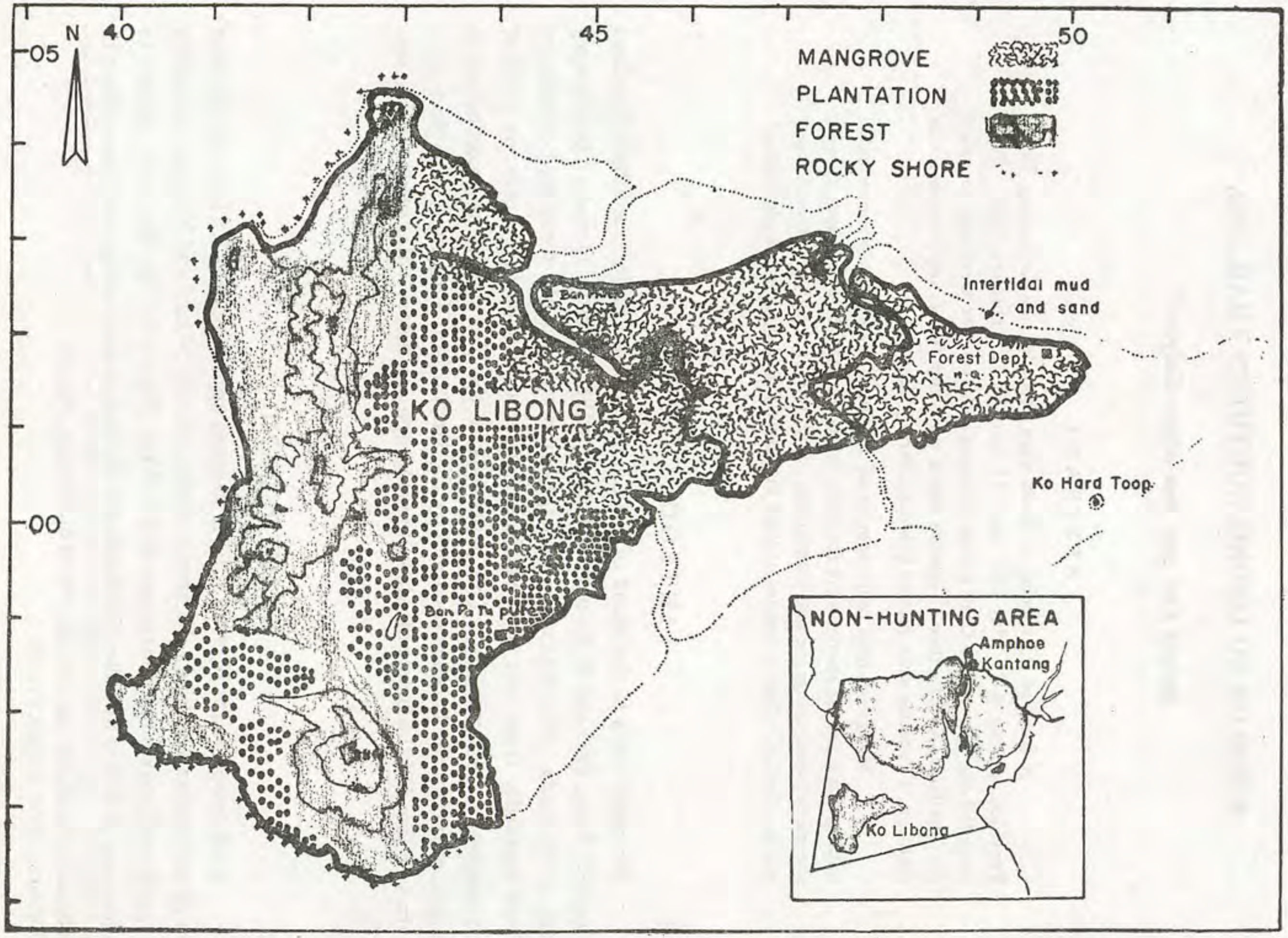


Figure 1. Distribution of habitats on Ko Libong, Trang, Trang Province, off western Peninsular Thailand. Map was traced from Royal Thai Survey Dept. sheets 4823 I and 4823 II, Series L7017; scales at margins show 1000 m UTM grid lines.

sea level. The forest has been removed from the low-lying central part of the island, where most of the human population is concentrated. This area is now dominated by rubber plantations and includes extensive areas of old plantation with much secondary growth in addition to intensively managed young plantation. There are also small areas of rice paddies, coconuts, bananas and other crops. The eastern part of the island consists mainly of tidal mangrove, though within this area are three grassy clearings on raised sandy patches, each 4-5 ha. Open coastal habitat consists of sandy beaches with small, rocky outcrops and extensive intertidal mudflats.

The island is situated in a non-hunting area, under the administration of the Royal Forest Department, which was declared in 1979.

METHODS

During the above-mentioned periods, we made at least one visit to approximately two-thirds of the island area and covered representative samples of each habitat, although we were unable to visit the western coast. Species of landbirds (other than aerial insectivores or other birds seen flying high overhead) were assigned to one or more of four habitats: forest, plantation, mangrove or open country. Indications of breeding (i.e., presence of nests containing eggs or young; recently-fledged juveniles or adults seen carrying food or nest material) were noted.

RESULTS

A total of 94 species of birds were recorded, of which 31 were shorebirds. Of the 63 landbird species, 52 were considered to be resident or probably resident on the basis of their known status on the adjacent mainland. Breeding was proven in 17 species during May (Table 1). Notes on selected species follow.

Changeable Hawk-Eagle *Spizaetus cirrhatus*

An adult was seen feeding a fledged juvenile in treetops on 13 May. The adult, a pale phase bird, was streaked beneath but the junenile had entirely unmarked, whitish underparts and sides of head contrasting with dark upperparts, as described in KING *et. al.*, 1975. A second adult, a dark phase bird, was seen subsequently.

Grey-headed Fishing Eagle *Ichthyophaga icthyaetus*

Single birds seen flying high over the island on 9 and 19 May were identified by their whitish head and base of tail, contrasting with uniformly dark grey underwing and body.

Osprey *Pandion haliaetus*

One bird was seen at rest in the mangroves on 1 February and probably the same individual was seen flying overhead on 2 February. This appears to be the first record for Trang Province.

Waders and Terns, *Charadriiformes*

An islet, Ko Hard Toop, about 1 km off the eastern tip of Libong is a major high-tide roost for waders and terns. We counted the birds roosting there on 31 January and 1 February 1982 from one of the Forest Department hides on the islet. The numbers are compared with those observed feeding on the mudflats (counted from a boat) in May 1981 (Table 2). Although we identified both Mongolian Plover *Charadrius mongolus* and Greater Sand Plover *Charadrius leschenaultii* we did not attempt to estimate the numbers of each species. *C. mongolus* appeared the commoner.

Notwithstanding the differences in counting methods used, the differences in the total counts are real and the markedly smaller numbers of birds observed in May can probably be attributed to the departure of a proportion of the wintering population for their breeding grounds in northern Asia.

While roosting, most Whimbrel *Numenius phaeopus* and Bar-tailed Godwits *Limosa lapponica* perched in the bare branches of mangrove trees. Redshanks *Tringa totanus* perched in lower, leafy mangrove trees and could only be counted effectively when flushed. The large numbers of Bar-tailed Godwits recorded on both count dates are of particular interest as the largest flock previously recorded in the Malay Peninsula was only 12 birds (MEDWAY & WELLS, 1976). The records of Kentish Plover *Charadrius alexandrinus* Mongolian Plover, Whimbrel, Black-tailed Godwit *Limosa limosa*, Bar-tailed Godwit, Terek Sandpiper *Xenus cinereus* and Curlew Sandpiper *Calidris ferruginea* all appear to be the first for Trang Province.

A single Crab Plover *Dromas ardeola* was seen on 6 May and 8 were present on 1 February. It appears to be well known that this species was recently discovered on Ko Libong (PILAI POONSWAD, pers. comm.) although we can find no published records for Thailand. There appears to be only one other record from the Malay Peninsula,

of 3 birds shot from a flock of 6 in Selangor Province, Malaysia, in September 1912 (MEDWAY & WELLS, 1976). It seems most likely that it occurs on Libong as a non-breeding visitor. The adults showed mainly white plumage with black primaries, secondaries and mantle, while immatures showed pale beige neck, nape and wing coverts. Feeding birds moved with the hesitant gait of the larger plovers *(Pluvialis spp.)* although they fed by wading knee-deep in standing water, with the neck extended in a manner reminiscent of a stilt, *Himantopus sp.*

A Pomarine Skua *Stercorarius pomarinus*, either a dark phase bird or an immature and lacking the elongate central tail feathers, was brought in alive by fishermen on 13 May. This appears to be only the second record for the Malay Peninsula and is the first record for Trang Province. We were unable, however, to discover its point of capture.

A mixed flock of over 100 Whiskered Terns *Chlidonias hybridus* and Common Terns *Sterna hirundo* was seen offshore on 2 February while 5 White-winged Black Terns *C. leucopterus* (4 in breeding dress) were seen on 6 May. These are the first records of all three species for Trang Province.

A Lesser Crested Tern *S. bengalensis* was seen flying offshore on 2 February and passed over our boat. It was distinguished from Great Crested Tern *S. bergii* by its smaller size, slimmer build and faster wingbeats. In addition, the upperparts were markedly paler and the bill thinner and orange-yellow rather than greenish-yellow as in *S. bergii*. This appears to be the first record for Trang Provinoe while the only other record for Thailand appears to be that of NADEE (1982).

The sightings of Gull-billed Tern *Gelochelidon nilotica* and Great Crested Tern (Table 2) also appear to be the first for Trang Province.

Woodpeckers, Picidae

We observed three species, the Laced *Picus vittatus*, the Common Goldenbacked *Dinopium javanense* and the Greater Golden-backed, *Chrysocolaptes lucidus*. Whereas *P. vittatus* appeared equally common in all three wooded habitats, *D. javanense* and *C. lucidus* appeared to be restricted to mangrove. Both of these species occur in forest in northern Thailand, but their particular association with mangrove in the peninsula is stressed by MEDWAY & WELLS (1976) who also record them for plantations, secondary growth etc. *D. javanense* consistently foraged higher in the trees than *C. lucidus*.

Blue-winged Pitta *Pitta moluccensis*

Although the closely similar Mangrove Pitta *P. megarhyncha* is resident on the west coast of the Malay Peninsula (MEDWAY & WELLS, 1976), we were sure that the two individuals we saw in May were *P. moluccensis* on the basis of their small-to-moderate size bills. They may perhaps have been migrant individuals.

Ashy Drongo *Dicrurus leucophaeus*

An adult was seen feeding a recently-fledged juvenile on 17 May. This appears to be the first record of the race *D. l. nigrescens*, which is resident in the Malay Peninsula, for Trang Province.

Ashy Tailorbird *Orthotomus ruficeps*

An adult was seen feeding a recently-fledged juvenile on 8 May, in low scrub at the edge of the mangroves. The juvenile was distinguished from the adult by its duller rufous ear coverts and crown and dirty whitish or pale grey throat. There are no previous records of this species for Trang Province.

Mangrove Whistler *Pachycephala cinerea*

An adult was seen feeding at least two recently-fledged young on 20 May. The juveniles were easily distinguishable by their yellowish-horn, instead of all black, bills and by their fresh, rufous-edged wing coverts and secondaries,

DISCUSSION

A total of 36 species of landbird were observed in mangrove, compared with 28 species in plantation and only 11 species in forest. In addition, 13 species of landbird other than waders were recorded in open country.

Other than the White-rumped Shama *Copsychus malabaricus*, all the species that we saw in forest were encountered elsewhere. While we may have overlooked a small number of highly skulking forest species, by and large our observations probably reflect the impoverishment of the forest bird fauna which is typical of islands (BROCKELMAN & NADEE, 1977). Island bird faunas usually show a lower ratio of stenotopic species (i. e. those specialised forms which have a narrow ecological tolerance) to eurytopic species (those with wide tolerance) than do those in mainland situations (MACARTHUR & WILSON, 1967, MACARTHUR *et. al.*, 1972). It is therefore significant that 5 of the species recorded in forest, *Spizaetus cirrhatus*, *Irena puella*, *Pycnonotus blanfordi*, *Macronous gularis* and *Stachyris erythroptera*, also occurred in plantations while another 3, *Merops viridis*, *Picus vittatus* and *Pycnonotus atriceps*, occurred in all three

wooded habitats. *Copsychus malabaricus* is a notably eurytopic species (MEDWAY & WELLS. 1976) and it was perhaps an accident that we failed to record it elsewhere. The Great Hornbill *Buceros bicornis*, perhaps the only truly stenotopic forest species that we encountered, was also seen in mangrove on one occasion, but this may have been due to the relatively small area and close proximity of the different habitats on Libong. A large, strong-flying bird such as a hornbill would routinely encounter different habitats when foraging.

Other than the Common Myna *Acridotheres tristis*, which occurred in association with coconut palms where it nested, no species was recorded exclusively in the plantations. This reflects the artificial nature of this habitat which is colonised by birds from adjacent natural woodlands. Fourteen species were shared between plantation and mangrove on Libong compared with only 5 shared between plantation and forest. WARD (1968) drew attention to the predominance of mangrove birds in man-made habitats such as gardens, plantations etc. in Southeast Asia. He pointed out that whereas the forest plant community is species-rich, favouring a high degree of specialisation among birds, the mangrove plant community resembles that of manmade habitats in being species-poor. Mangrove birds, which are comparatively unspecialised foragers, would therefore be at an advantage in plantations.

The great majority of birds found in plantations on Libong were associated with old rubber plantations with extensive secondary growth. Only 4 species, *Turnix suscitator*, *Pycnonotus goiavier*, *P. blanfordi* and *Copsychus saularis*, were encountered in intensively-managed, young plantations. Of 8 species found only in open country, 4, *Merops philippinus*, *Locustella lanceolata*, *Motacilla flava* and *Lanius cristatus*, were migrant visitors. *Locustella lanceolata*, *Prinia flaviventris* and *Cisticola juncidis* were associated with long grass in dry clearings in the mangrove.

ACKNOWLEDGEMENTS

We are most grateful to Mr. Phairot Suvanakorn and Mr. Jira Jinphanugun of the Wildlife Conservation Division, Royal Forest Department, for introducing us to Ko Libong and making it possible to work there. We also thank Mr. Surachai Wongsiri, Chief of Ko Libong Non-Hunting Area, and his staff for extending their hospitality and assistance to us during our stay. In addition, we thank Philip Round for his encouragement and assistance in writing this paper and Dr. Warren Brockelman for his many helpful comments.

We are especially grateful to Dr. Boonsong Lekagul for his advice and support throughout our stay in Thailand. He kindly opened his house and library to us during the writing of this paper and also loaned us optical equipment.

Table 1. A systematic list of bird species recorded on Ko Libong, Trang Province, 6-21 May, 1981 and 31 January to 2 February, 1982, together with habitats occupied by landbirds.
M = presumed migrant or winter visitor; B = breeding proven; R = new distribution record; X = present in particular habitat.

Common name	Scientific name	Status	Habitat			
			Forest	Plantation	Mangrove	Open country
Little Green Heron	*Butorides striatus*				X	
Pacific Reef Egret	*Egretta sacra*					
Intermediate Egret	*Egretta intermedia*					
Osprey	*Pandion haliaetus*	M R			X	
Black-shouldered Kite	*Elanus caeruleus*					X
Brahminy Kite	*Haliastur indus*			X		X
White-bellied Sea Eagle	*Haliaeetus leucogaster*					
Grey-headed Fishing Eagle	*Icthyophaga icthyaetus*					
Crested Serpent Eagle	*Spilornis cheela*		X		X	
Shikra	*Accipiter badius*				X	
Changeable Hawk-eagle	*Spizaetus cirrhatus*	B	X	X		
Barred Button Quail	*Turnix suscitator*			X		X
Red-wattled Lapwing	*Vanellus indicus*	M				X
Grey Plover	*Pluvialis squatarola*	M				
Lesser Golden Plover	*Pluvialis dominica*	M				
Kentish Plover	*Charadrius alexandrinus*	M R				
Mongolian Plover	*Charadrius mongolus*	M R				
Greater Sand Plover	*Charadrius leschenaultii*	M				
Eurasian Curlew	*Numenius arquata*	M				

Table 1 (Continued)

Common name	Scientific name	Status	Habitat			
			Forest	Plantation	Mangrove	Open country
Whimbrel	*Numenius phaeopus*	M R				
Black-tailed Godwit	*Limosa limosa*	M R				
Bar-tailed Godwit	*Limosa lapponica*	M R				
Common Redshank	*Tringa totanus*	M				
Common Greenshank	*Tringa nebularia*	M				
Terek Sandpiper	*Xenus cinereus*	M R				
Common Sandpiper	*Actitis hypoleucos*	M				
Ruddy Turnstone	*Arenaria interpres*	M				
Pintail Snipe	*Gallinago stenura*	M				X
Great Knot	*Calidris tenuirostris*	M				
Rufous-necked Stint	*Calidris ruficollis*	M				
Curlew Sandpiper	*Calidris ferruginea*	M R				
Crab Plover	*Dromas ardeola*	M R				
Pomarine Skua	*Stercorarius pomarinus*	M R				
Whiskered Tern	*Chlidonias hybrida*	M R				
White-winged Black Tern	*Chlidonias leucopterus*	M R				
Gull-billed Tern	*Gelochelidon nilotica*	M R				
Common Tern	*Sterna hirundo*	M R				
Little Tern	*Sterna albifrons*					
Great Crested Tern	*Sterna bergii*	R				
Lesser Crested Tern	*Sterna bengalensis*	M R				
Pink-necked Pigeon	*Treron vernans*			X	X	

Table 1 (Continued)

Common name	Scientific name	Status	Habitat			
			Forest	Plantation	Mangrove	Open country
Spotted Dove	*Streptopelia chinensis*			X		X
Greater Coucal	*Centropus sinensis*			X	X	
Spotted Wood Owl	*Strix seloputo*				X	
Large-tailed Nightjar	*Caprimulgus macrurus*			X	X	
Swiftlet	*Collocalia sp.*					
Needletail	*Hirundapus* sp. (probably *giganteus*)					
Brown-winged Kingfisher	*Pelargopsis amauroptera*				X	
Black-capped Kingfisher	*Halcyon pileata*	M		X	X	
White-collared Kingfisher	*Halcyon chloris*				X	
Chestnut-headed Bee-eater	*Merops leschenaulti*				X	
Blue-tailed Bee-eater	*Merops philippinus*	M				X
Blue-throated Bee-eater	*Merops viridis*	M	X	X	X	
Dollarbird	*Eurystomus orientalis*				X	
Great Hornbill	*Buceros bicornis*		X		X	
Laced Woodpecker	*Picus vittatus*	B	X	X	X	
Common Golden-backed Woodpecker	*Dinopium javanense*	B			X	
Greater Golden-backed Woodpecker	*Chrysocolaptes lucidus*				X	
Blue-winged Pitta	*Pitta moluccensis*			X	X	
Barn Swallow	*Hirundo rustica*	M				

Table 1 (Continued)

Common name	Scientific name	Status	Habitat			
			Forest	Plantation	Mangrove	Open country
Pacific Swallow	*Hirundo tahitica*					
Common Iora	*Aegithina tiphia*				X	
Black-headed Bulbul	*Pycnonotus atriceps*		X	X	X	
Yellow-vented Bulbul	*Pycnonotus goiavier*	B		X		X
Blanford's Bulbul	*Pycnonotus blanfordi*	B	X	X		
Ashy Drongo	*Dicrurus leucophaeus*	B R		X	X	
Black-naped Oriole	*Oriolus chinensis*	M			X	
Asian Fairy Bluebird	*Irena puella*		X	X		
Large-billed Crow	*Corvus macrorhynchos*			X	X	
Chestnut-winged Babbler	*Stachyris erythroptera*		X	X		
Striped Tit-babbler	*Macronous gularis*	B	X	X		
Magpie Robin	*Copsychus saularis*	B		X	X	
White-rumped Shama	*Copsychus malabaricus*		X			
Lanceolated Warbler	*Locustella lanceolata*					X
Ashy Tailorbird	*Orthotomus ruficeps*	B R		X	X	
Yellow-bellied Prinia	*Prinia flaviventris*					X
Zitting Cisticola	*Cisticola juncidis*					X
Brown Flycatcher	*Muscicapa latirostris*	M			X	
Pied Fantail	*Rhipidura javanica*	B			X	
Black-naped Monarch	*Hypothymis azurea*			X	X	
Asian Paradise Flycatcher	*Terpsiphone paradisi*				X	
Mangrove Whistler	*Pachycephala cinerea*	B			X	

Table 1 (Continued)

Common name	Scientific name	Status	Habitat			
			Forest	Plantation	Mangrove	Open country
Yellow Wagtail	*Motacilla flava*	M				X
Forest Wagtail	*Dendronanthus indicus*	M			X	
Richard's Pipit	*Anthus novaeseelandiae*	B				X
Brown Shrike	*Lanius cristatus*	M				X
Glossy Starling	*Aplonis panayensis*	B		X	X	
Common Myna	*Acridotheres tristis*	B		X		
Brown-throated Sunbird	*Anthreptes malacensis*	B		X	X	
Olive-backed Sunbird	*Nectarinia jugularis*	B		X	X	
Scarlet-backed Flowerpecker	*Dicaeum cruentatum*			X	X	
Oriental White-eye	*Zosterops palpebrosa*	B			X	
White-rumped Munia	*Lonchura striata*			X		X

Table 2. Estimated numbers of waders and terns roosting on Ko Hard Toop, near Ko Libong, or feeding on adjacent mudflats, May, 1981 and 31 January – 1 February, 1982.

Common name	May 1981	31 Jan-1 Feb, 1982
Grey Plover	3	76
Lesser Golden Plover		1
Kentish Plover		c20
Sand Plover spp.	c100	c250
Curlew	7	46
Whimbrel	c100	c200
Black-tailed Godwit	1	
Bar-tailed Godwit	c100	177
Redshank	c40	c60
Greenshank	2	21
Terek Sandpiper	10	c100
Common Sandpiper		5
Turnstone	4	15
Great Knot		25
Rufous-necked Stint		c30
Curlew Sandpiper		37
Crab Plover	1	8
Gull-billed Tern		29
Little Tern		220
Great Crested Tern		14

REFERENCES

BROCKELMAN, W.Y. and N. NADEE. 1977. Prelinary survey and biogeographic analysis of the birds of the Surin Islands, Thailand. *Nat. Hist. Bull. Siam Soc.* 26 : 211–226

KING, B.F., E.C. DICKINSON and M.W. WOODCOCK. 1975. *A Field Guide to the Birds of South–East Asia*. Collins, London.

MACARTHUR, R.H., J.M. DIAMOND and J.R. KARR. 1972. Density compensation in island faunas. *Ecology* 53 : 330–342.

MACARTHUR, R.H. and E.O. WILSON. 1967. *The theory of island biogeography*. Princeton Univ. Press, Princeton.

MEDWAY, LORD and D.R. WELLS. 1976 *The Birds of the Malay Peninsula*, Vol 5. Witherby, London.

NADEE, N. 1982. Lesser Crested Tern, *Sterna bengalensis*, a new bird for Thailand. *Nat. Hist. Bull. Siam Soc.* 30 :

WARD, P. 1968. Origin of the avifauna of urban and suburban Singapore. *Ibis* 110 : 239-255.